

West const vs. East const – Core Guidelines vs. Logic

Wolfram Rösler

```
// "West const"  
const int w = 0;
```

```
// "East const"  
int const e = 0;
```

NL.26: Use conventional `const` notation

Reason Conventional notation is more familiar to more programmers. Consistency in large code bases.

Example

```
const int x = 7;      // OK
int const y = 9;      // bad

const int *const p = nullptr;  // OK, constant pointer to constant int
int const *const p = nullptr;  // bad, constant pointer to constant int
```

Note We are well aware that you could claim the “bad” examples more logical than the ones marked “OK”, but they also confuse more people, especially novices relying on teaching material using the far more common, conventional OK style.
As ever, remember that the aim of these naming and layout rules is consistency and that aesthetics vary immensely.

```
// "West const"  
const int w = 0;
```



```
// "East const"  
int const e = 0;
```



```
int x;
```

```
// "West const"
```

```
const int& w = x;
```



```
// "East const"
```

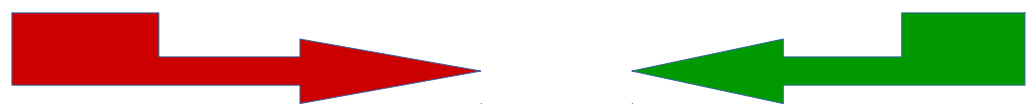
```
int const& e = x;
```



```
int x;
```


```
// "West const"
```

```
const int* const w = &x;
```



```
// "East const"
```

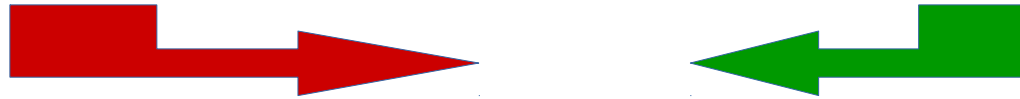
```
int const* const e = &x;
```



```
int x;
```

```
// "West const"
```

```
const int *const w = &x;
```



```
// "East const"
```

```
int const *const e = &x;
```



Another case of Core Guidelines vs. Logic (cf. "NL.18: Use C++-style declarator layout")


```
class C {
```

```
    // "West const"
```

```
    const int* w() const;
```



```
    // "East const"
```

```
    int const* e() const;
```



```
};
```

```
typedef int* intptr;  
int x;
```

```
// "West const"
```

```
const intptr p=&x;  
int* const q=&x;  
const int* r=&x;
```

```
// "East const"
```

```
intptr const p=&x;  
int* const q=&x;  
int const* r=&x;
```

```
// p and q have identical types (are const),  
// r is different (*r is const, r is not)
```

Resources

- C++ Core Guidelines

<http://isocpp.github.io/CppCoreGuidelines/CppCoreGuidelines>

- Bjarne Stroustrup's C++ Style/Technique FAQ

http://www.stroustrup.com/bs_faq2.html#constplacement

- Stack Overflow

<https://stackoverflow.com/questions/5503352/>

<https://stackoverflow.com/questions/1143262/>

<https://stackoverflow.com/questions/988069/>